

and Transportation in 1995. I joined Occidental Oil & Gas in 2004 and held various roles within Centurion Pipeline and Oxy Corp Business Development before joining the Navigator organization in 2017. A copy of my resume is attached as Exhibit A.

4. Please describe your responsibilities with Navigator.

Answer: I am in charge of operations for the Navigator Heartland Greenway Pipeline, including matters related to emergency response planning and preparedness; operations and remote monitoring; Supervisory Control and Data Acquisition (SCADA), in-line and visual pipeline inspection, and surveillance; spill frequency; the operation of valves and above-ground facilities; and public awareness.

5. Have you previously submitted or prepared testimony in this proceeding in South Dakota?

Answer: No.

6. Please state for which sections of the application that Navigator has filed with the South Dakota Public Utilities Commission you are responsible.

Answer: My testimony relates to Section 5.0 of the application on Operation and Maintenance.

7. Please describe Navigator's approach to operating the pipeline.

Answer: Navigator is committed to building and operating the Project, including the pipeline, so that it meets and exceeds regulatory and safety requirements while also minimizing the collective impact on the environment, landowners, and the public. We will comply with 49 CRF Parts 195.

8. What experience and qualifications does the Navigator organization have to operate the pipeline?

Answer: As explained in the testimony of David Giles, the Navigator organization has a team with over 200 years of combined experience in the pipeline infrastructure industries, including technical expertise in the area of safely transporting various commodities across pipelines. This experience includes safely operating approximately 1,300 miles of pipeline and associated infrastructure over the past decade. In addition to myself, our Director of Health Environmental Safety and Regulatory Compliance with almost 20 years of experience is and will be involved in developing the plans and procedures and monitoring compliance. We will be building out a full scale highly qualified operations team including a VP of Operations and regional directors and managers in addition to the subject matter experts and technicians, to perform measurement, corrosion prevention and protection, electrical, and instrumentation duties, as well as a robust safety training program.

9. What operating procedures will be established to govern the operation, monitoring, and control of the pipeline?

Answer: Operating procedures are being prepared, and will be followed, to govern the operation of the Pipeline and ensure the Pipeline is operated safely. An Operation Manual for the Pipeline is being developed and will be finalized prior to the Pipeline being placed in-service in accordance with PHMSA regulations; it will be routinely reviewed and updated as warranted throughout operation of the HGPS to ensure its continuing effectiveness. Certain components of that manual are already known, including that the Pipeline will be subject to a variety of ongoing inspections and testing to verify continued integrity and compliance with applicable regulatory and industry standards while in operation.

10. Please explain what integrity management is and describe your integrity management program.

Answer: An Integrity Management Program (“IMP”) is a program implemented, and regulated updated, to help evaluate and maintain the integrity of a pipeline and to mitigate and remediate any risks to high consequence areas (“HCAs”) presented by a pipeline. PHMSA regulations, found at 49 C.F.R. § 195.452, require pipeline operators to develop written IMPs and for an IMP to be in place before a new pipeline begins operations. Navigator will implement a robust integrity management program in compliance with PHMSA regulations to continually assess the pipeline for potential risks to the system, to identify preventative and mitigation measures to address risks, and to specify criteria for remedial actions to address integrity concerns. The purposes of integrity management include performing integrity assessments of pipelines in places where a pipeline leak or failure could have significant adverse consequences, meaning High Consequence Areas (HCAs), improving operational processes to manage pipeline integrity to prevent leaks or failures, and improving public confidence in pipeline safety. Integrity management includes regularly evaluating all information about the pipeline and its specific integrity threats, and periodically evaluating the effectiveness of the program and identifying improvements to enhance its effectiveness.

11. What is a High Consequence Area or HCA?

Answer: A high consequence area is defined in 49 C.F.R. § 195.450 of the PHMSA regulations as:

(1) A commercially navigable waterway, which means a waterway where a substantial likelihood of commercial navigation exists;

(2) A high population area, which means an urbanized area, as defined and delineated by

the Census Bureau, that contains 50,000 or more people and has a population density of at least 1,000 people per square mile;

(3) An other populated area, which means a place, as defined and delineated by the Census Bureau, that contains a concentrated population, such as an incorporated or unincorporated city, town, village, or other designated residential or commercial area; or

(4) An unusually sensitive area, as defined in § 195.6 of the PHMSA regulations.

12. What is an emergency response plan?

Answer: An emergency response plan is a plan that includes safety response procedures if an emergency condition occurs as a result of the operation of a pipeline. It provides guidance on how personnel should respond under various circumstances including step-by-step directions for internal and external responses, notifications, documentation, reporting, etc.

13. Is an emergency response plan governed by PHMSA regulations?

Answer: Yes. PHMSA regulations require emergency response plans to include procedures for receiving, identifying and classifying emergency events; responding to emergencies; having personnel, equipment, instruments and tools necessary to respond to an emergency; taking action necessary to minimize and control any releases of carbon dioxide; minimizing public exposure to injury or accidents; notifying and coordinating with local emergency services; providing for post-accident review to determine if response procedures were effective; and providing actions to be taken by control room operators during an emergency. These requirements are set forth in PHMSA's regulations at 49 C.F.R. 195.402. Applicant is developing such plans and collaborating with respective public emergency responders in developing its plans and will be initiating training and communication in advance of operating the HGPS.

14. How will Navigator be prepared to respond if there is a release?

Answer: Navigator will be able to respond to and minimize leaks using the remote-control capabilities I have discussed above. Additionally, Navigator and its contractors will maintain emergency response equipment and personnel at strategic points along the route and train their personnel to respond to any pipeline emergencies. As I described earlier in this testimony, an emergency response plan for the Pipeline is being prepared and will be in place prior to commencing operation. Systems and procedures like the IMP, detailed operation and maintenance programs, routine inspections, regular employee training, detailed coordination with emergency management and response outfits, and comprehensive public awareness and education efforts, will also help optimize safe operation of the Pipeline and minimize the risk of a release.

15. Will Navigator train and otherwise work with local first responders in the area of the pipeline on how to respond to a leak?

Answer: Yes. As described Section 7.5 of the Application, Navigator will coordinate with and train local emergency responders and authorities in preventing and responding to any Pipeline-related problems. Navigator will coordinate with existing emergency response departments along and in proximity to the Pipeline route when developing its emergency response plan for the Pipeline and will make sure they and any mutual aid parties are informed of the operation risks and are equipped to respond in the unlikely event of a release. Navigator will also conduct and host periodic emergency response drills with its employees and local emergency responders, including planned drills, desktop events, and simulated field events, throughout the operation of the Pipeline.

16. Is there specialized equipment that is needed or useful to respond to and contain a leak?

Answer: Navigator is evaluating the necessary emergency response equipment and communicating with all emergency responders along the HGPS, including mutual aid partners. Navigator is drafting the emergency response plans and will provide drafts to the emergency responders for review and feedback before meeting with all parties in 2023 to discuss emergency situations and identify the equipment needs of each outfit. Navigator is committed to purchasing necessary equipment for emergency responders so that an emergency can be properly responded to as well as paying responders for the necessary training needed to be prepared for such an emergency.

17. Please describe the purpose, placement, and operation of mainline valves.

Answer: The Pipeline includes numerous remote-controlled mainline valves (MLVs) to allow for prompt response and isolation of line segments in the unlikely event of a release. The valves will be located at least every 7.5 miles apart in high consequence areas (HCAs) and every 20 miles apart in non-HCAs as required by 49 CFR Part 195 section 195.260. The valves will be connected to the Operations Control Center located in Omaha, Nebraska, which is staffed 24/7 by at least two persons as required by PHMSA. Redundant communication and power systems will be installed to ensure constant connectivity and information flow.

18. Please explain cathodic protection and how it will be used on this pipeline.

Answer: Cathodic protection is a method used to prevent external pipeline corrosion. A cathodic protection system is comprised of engineered anodes that are connected to the Pipeline through which a low voltage direct current is applied to the Pipeline. The result is that the anodes corrode rather than the Pipeline.

19. Please summarize Navigator’s leak detection program.

Answer: Navigator will implement a comprehensive leak detection system that includes both non-continuous and continuous monitoring. The non-continuous monitoring components are aerial patrol and in-line inspection. Inline inspections are done with smart pigs that are used to detect internal corrosion. To prevent internal corrosion, all captured carbon dioxide will be continuously tested at capture facilities and will have to meet strict specifications in order to be transferred into and transported by the pipeline. Controls and safety equipment for the pipeline will also be tested and calibrated on a routine basis. The continuous monitoring include compensated mass balance, real time transient model, negative pressure wave, fiber optic sensing cables, and strategically placed CO₂ monitoring devices.

The pipeline will also be remotely monitored and controlled 24 hours per day, 7 days per week, 365 days per year, from an operational control center (“OCC”), the location of which is still under development but is expected to be in the Midwest with a back-up OCC in a different area to be available in the event the primary OCC experiences a loss of power, damage from a natural disaster, or other events such that the HGPS will always be monitored while operating in accordance with PHMSA regulations under CFR Part 195. The OCC will be manned and monitored by at least two operators at all times. The Pipeline will be equipped with and use an advanced Supervisory Control and Data Acquisition (“SCADA”) system to continuously monitor pressure, temperature, and flow of the carbon dioxide. The information monitored by the SCADA system will be relayed to the OCC. The OCC will utilize modern pipeline monitoring and control technology to safely operate the Pipeline by maintaining the established operating parameters and will be capable of remotely isolating pipeline segments when alerted to abnormal operating conditions or if safety parameters are exceeded. As described in the testimony of

Stephen Lee, the SCADA will have a Computational Pipeline Monitoring system to analyze flow deviations in the pipeline, as well as backup power and communication sources if the primary power and communications sources fail. OCC personnel will be trained in and will follow strict procedures to direct actions during normal and abnormal operations to prevent the risk of a release. Training will be accordance with PHMSA regulations and asset-specific requirements.

The Pipeline will also have local controls and manual overrides to enable personnel in the field to control and operate the Pipeline in the event remote communications fail

20. Please describe the processes for aerial inspections of the pipeline during operations.

Answer: As required by 49 CFR Part 195, the pipeline will be inspected aerially 26 times per year at intervals not to exceed three weeks, but ideally every 10 days, weather permitting. Aerial patrols will occur a minimum of two times per month. Aerial patrols are done to detect abnormal conditions and dangerous activities, like unauthorized excavation by third parties.

21. Will personnel be employed to inspect and maintain the pipeline once it is in operation?

Answer: Yes. Personnel will be assigned to conduct local inspection and maintenance along the pipeline after it is in operation. Employees and contractors will be hired and located along the pipeline route to be able to provide prompt responses for maintenance and repair issues. We estimate that 80-100 full time employees will be stationed along the entire pipeline, with approximately 10 employees located in South Dakota.

22. Please describe your public awareness program.

Answer: Extensive public education and outreach programs, including damage-prevention programs, that meet or exceed PHMSA and industry requirements will be used to increase public awareness of the pipeline and related safety matters. The pipeline location will

be visibly marked as required by federal regulation. This will include placing signs at road and highway crossings, commercially navigable waterways, and other locations to alert the public to the presence of an underground line. The signage will include owner contact and emergency information. NHG will also participate in the State and Federal 811 One-Call system for damage prevention and public awareness. In addition, to help protect against inadvertent damage by third-party excavators, warning tape will be installed approximately two feet above the pipeline and below the plow-line.

23. Does this conclude your direct testimony?

Answer: Yes.

Dated this 26th day of September, 2022.

/s/ Vidal Rosa
Vidal Rosa